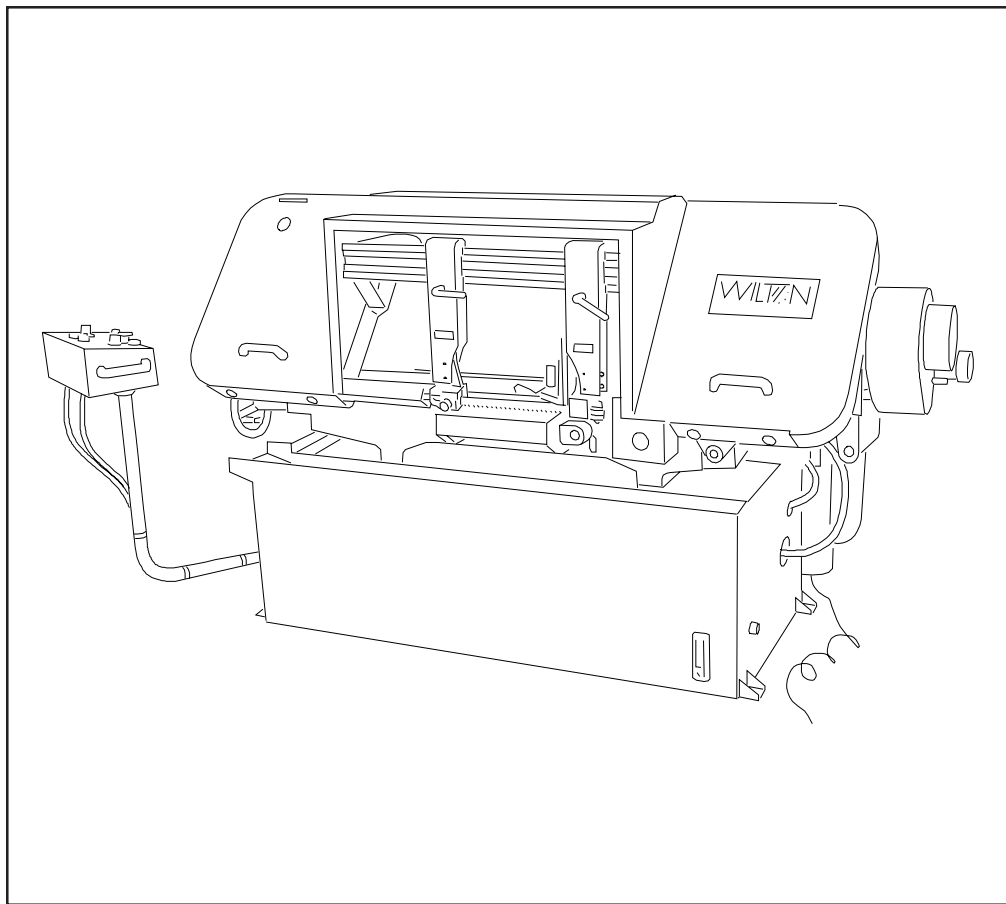




Operating Instructions — Parts Manual
20-Inch x 20-Inch Semi Automatic
Horizontal Cut-Off Band Saw
Model: 7060



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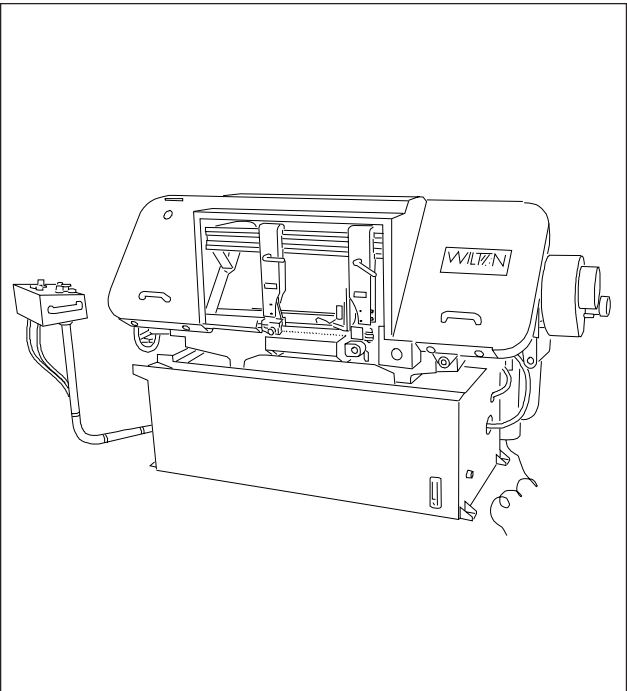
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General Specifications

The Wilton 7060 Semi-Automatic Horizontal Cut-Off Band Saw incorporates a number of exclusive design features and innovations to make this saw a powerful and productive addition to machine shops, maintenance shops, tool rooms, and fabrication and welding shops. The exclusive swivel control panel allows the operator access to all machine controls from any side of the machine. The exclusive 6-point contact blade guide assemblies give the machine greater accuracy and longer blade life. The rapid acting, patented, 3-jaw vise provides simple, fast, and accurate set-ups for both straight and miter cuts. In addition, the semi-automatic cycle enables the operator to initiate, with the push of a button, the following steps: blade start, saw head frame down, blade stop, and saw head frame up. This completely versatile band saw is a proven time saver, offering optimum sawing performance.



Specifications

Cutting Capacity At 90 degrees At 45 degrees	12 inches Round/12 x 35 inches Rectangle 12 inches Round/12 x 12 inches Rectangle
Blade Size Blade Wheel Diameter Blade Speeds	1 x 0.035 x 156 inches 17 inches Diameter, Cast Iron 82 to 262 SFPM, Variable Speed
Motor	3 HP, 3 Phase, 230/460 Volts
Dimensions	87 x 31.5 x 53 Inches
Net Weight Shipping Weight	1,144 pounds 1,279 pounds



WARNING

- Misuse of this machine can cause serious injury.
- For safety, machine must be set up, used and serviced properly.
- Read, understand and follow instructions in the Operating Instructions and Parts Manual which was shipped with your machine.

When Setting up Machine:

- Always avoid using machine in damp or poorly lighted work areas.
- Always be sure the machine support is securely anchored to the floor or the work bench.

When Using Machine:

- Always wear safety glasses with side shields (See ANSI Z87.1)
- Never wear loose clothing or jewelry.
- Never overreach - you may slip and fall.

When Servicing Machine:

- Always disconnect the machine from its electrical supply while servicing.

- Always follow instructions in Operating Instructions and Parts Manual when changing accessory tools or parts.
- Never modify the machine without consulting Wilton Corporation.

You - the Stationary Power Tool User - Hold the Key to Safety.

Read and follow these simple rules for best results and full benefits from your machine. Used properly, Wilton's machinery is among the best in design and safety. However, any machine used improperly can be rendered inefficient and unsafe. It is absolutely mandatory that those who use our products be properly trained in how to use them correctly. They should read and understand the Operating Instructions and Parts Manual as well as all labels affixed to the machine. Failure in following all of these warnings can cause serious injuries.

Machinery General Safety Warnings

1. Always wear protective eye wear when operating machinery. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1 specifications. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from breakage of eye protection.
2. Wear proper apparel. No loose clothing or jewelry which can get caught in moving parts. Rubber soled footwear is recommended for best footing.
3. Do not overreach. Failure to maintain proper working position can cause you to fall into the machine or cause your clothing to get caught pulling you into the machine.
4. Keep guards in place and in proper working order. Do not operate the machine with guards re moved.
5. Avoid dangerous working environments. Do not use stationary machine tools in wet or damp locations. Keep work areas clean and well lit.
6. Avoid accidental starts by being sure the start switch is OFF before plugging in the machine.
7. Never leave the machine running while unattended. Machine shall be shut off whenever it is not in operation.
8. Disconnect electrical power before servicing.
9. Whenever changing accessories or general maintenance is done on the machine, electrical power to the machine must be disconnected before work is done.
9. Maintain all machine tools with care. Follow all maintenance instructions for lubricating and the changing of accessories. No attempt shall be made to modify or have makeshift repairs done to the machine. This not only voids the warranty but also renders the machine unsafe.
10. Machinery must be anchored to the floor.
11. Secure work. Use clamps or a vise to hold work, when practical. It is safer than using your hands and it frees both hands to operate the machine.
12. Never brush away chips while the machine is in operation.
13. Keep work area clean. Cluttered areas invite accidents.
14. Remove adjusting keys and wrenches before turning machine on.
15. Use the right tool. Don't force a tool or attachment to do a job it was not designed for.
16. Use only recommended accessories and follow manufacturers instructions pertaining to them.
17. Keep hands in sight and clear of all moving parts and cutting surfaces.
18. All visitors should be kept at a safe distance

from the work area. Make the workshop completely safe by using padlocks, master switches, or by removing starter keys.

19. Know the tool you are using — its application, limitations, and potential hazards.

General Electrical Cautions

This saw should be grounded in accordance with the National Electrical Code and local codes and ordinances. This work should be done by a qualified electrician. The saw should be grounded to protect the user from electrical shock.

Caution: For circuits which are far away from the electrical service box, the wire size must be increased in order to deliver ample voltage to the motor. To minimize power losses and to prevent motor overheating and burnout, the use of wire sizes for branch circuits or electrical extension cords according to the following table is recommended.

Wire Sizes

Conductor Length	AWG (American Wire Gauge) Number	
	240 Volt Lines	120 Volt Lines
0 - 50 Feet	No. 14	No. 14
50 - 100 Feet	No. 14	No. 12
Over 100 Feet	No. 12	No. 8

Safety Instructions on Sawing Systems

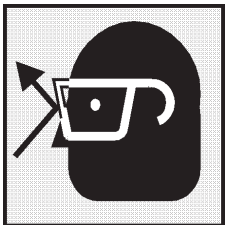
- Always wear leather gloves when handling saw blade. The operator shall not wear gloves when operating the machine.
- All doors shall be closed, all panels replaced, and other safety guards in place prior to the machine being started or operated.
- Be sure that the blade is not in contact with the workpiece when the motor is started. The motor shall be started and you should allow the saw to come up to full speed before bringing the saw blade into contact with the workpiece.
- Keep hands away from the blade area. **See Figure A.**
- Remove any cut off piece carefully while keeping your hands free of the blade area.
- Saw must be stopped and electrical supply must be cut off before any blade replacement or adjustment of blade support mechanism is done, or before any attempt is made to change the drive belts or before any periodic service or maintenance is performed on the saw.
- Remove loose items and unnecessary workpieces from area before starting machine.
- Bring adjustable saw guides and guards as close as possible to the workpiece.
- Always wear protective eye wear when operating, servicing, or adjusting machinery. Eyewear shall be impact resistant, protective safety glasses with side shields complying with ANSI Z87.1 specifications. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from breakage of eye protection. **See Figure B.**
- Nonslip footwear and safety shoes are recommended. **See Figure C.**
- Wear ear protectors (plugs or muffs) during extended periods of operation. **See Figure D.**
- The workpiece, or part being sawed, must be securely clamped before the saw blade enters the workpiece.
- Remove cut off pieces carefully, keeping hands away from saw blade.
- Saw must be stopped and electrical supply cut off or machine unplugged before reaching into cutting area.
- Avoid contact with coolant, especially guarding your eyes.

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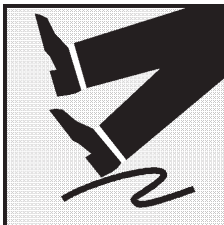
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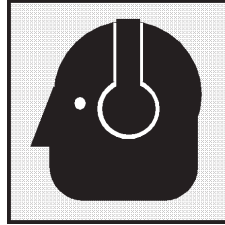
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C



D



Introduction

This manual includes operating and maintenance instructions for the Wilton 12-inch by 20-inch Cut Off Band Saw, Model 7060. This manual also includes parts listings and illustrations of replaceable parts.

Cut-Off Saw Features

Refer to Figure 1 and 2 for cut-off saw features

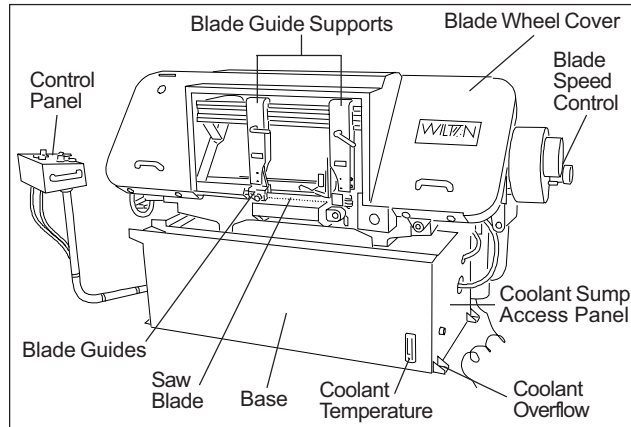


Figure 1: Saw Features (Front View)

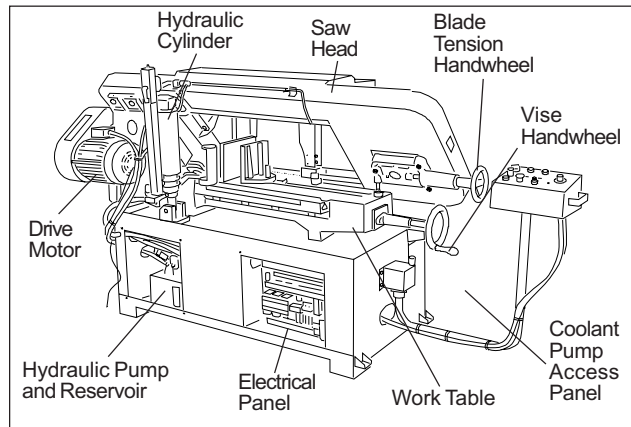


Figure 2: Saw Features (Rear View)

Operating Instructions

Controls

The operating controls for the saw are provided in a control panel on the left side of the machine. The control panel is mounted on a pivoting tube. The pivoting tube allows the operator to position the control panel in a convenient location.

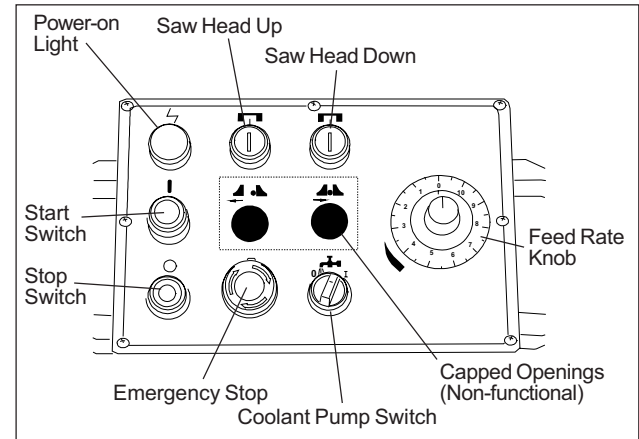


Figure 3: Control panel

The upper row of controls include the following:

1. Power On light indicates when power is connected to the machine.
2. Saw Head Up pushbutton is used to raise the head.
3. Saw Head Down pushbutton is used to lower the head onto the workpiece.

The center row of controls include the following:

1. Start pushbutton is used to start the saw blade drive motor and the hydraulic pump motor. The hydraulic pump provides the hydraulic pressure required to raise and lower the saw head.
2. Feed Rate control is used to set the rate at which the blade feeds through the workpiece.

Variable Speed Adjustment From 25 MPM TO 75 MPM

Recommended Speed for Cutting Various Materials

SPEED/MPM	Material To Be Cut
25	Tool Steel, Stainless Steel, Alloy Steel, Phosphor Bronze, Hard Bronze, Hard Cast Iron, Malleable Iron.
40	Mild Steel, Soft Cast Iron, Medium Hard Brass, Medium Hard Bron
50	Soft Brasses and Bronzes, Hard Aluminum, Plastics
75	Plastics, Soft and Medium Soft Aluminum, Wood, Other Light Materials

The bottom row of controls include the following:

1. Stop pushbutton is used to stop the saw blade drive motor.
2. Emergency stop pushbutton is used to quickly disconnect electrical power to the machine.
3. Coolant On/Off selector switch is used to start and stop the coolant pump motor.

Other Controls

Refer to Figures 1 and 2 for location of the following controls:

1. Drive motor speed control: used to set drive motor speed in meters per minute.
2. Blade guide support adjustment: used to set distance between the saw blade guide bearing as required by the size of the workpiece.
3. Blade tensioning hand wheel: use to tighten the saw blade on the drive and idler wheels.
4. Vise clamping hand wheel: used to tighten the vise jaws against the workpiece.

Setting Blade Speed

1. The blade speed is controlled by an adjustment mechanism on the right end of the saw. Speed increases when the adjustment knob is turned counterclockwise. Speed decreases when the knob is turned clockwise.
2. A placard on the drive belt guard (shown below) provides recommended speeds for various materials.
3. A speed indicator is provided on the barrel of the adjustment mechanism. The indicator provides speed indications in feet per minute and meters per minute. (The meters per minute values are shown in parenthesis on the indicator.) The graduations are:

<u>Feet per Minute</u>	<u>Meters per Minute</u>
70	(21)
100	(30)
130	(40)
160	(48)

4. The feed rates on the placard are expressed in meters per minute. The feed rate graduations available on the indicator may not match the recommended feed rate. An approximate speed may therefore be required. For example, to set a speed rate of 25 meters per minute, the indicator would be set about midway between 21 meters-per-minute and the 30 meters-per-minute graduations.

WARNING: TO CHANGE SPEED, THE SAW MOTOR MUST BE OPERATING.

5. Turn the speed adjustment knob to the desired rate setting as determined by the material being cut.

Raising/Lowering the Saw Head

1. To raise the saw head, press the Saw Head Up pushbutton. The saw head will raise until the upper limit switch (refer to Figure 4) trips.
2. To lower the saw head, press the Saw Head Down pushbutton. The saw head will lower until the lower limit switch trips.
3. When the saw head is being lowered to cut a workpiece, the saw blade drive motor must be started before lowering the blade against the workpiece. Set the coolant pump selector to the on (I) position If coolant is required by the material being cut.

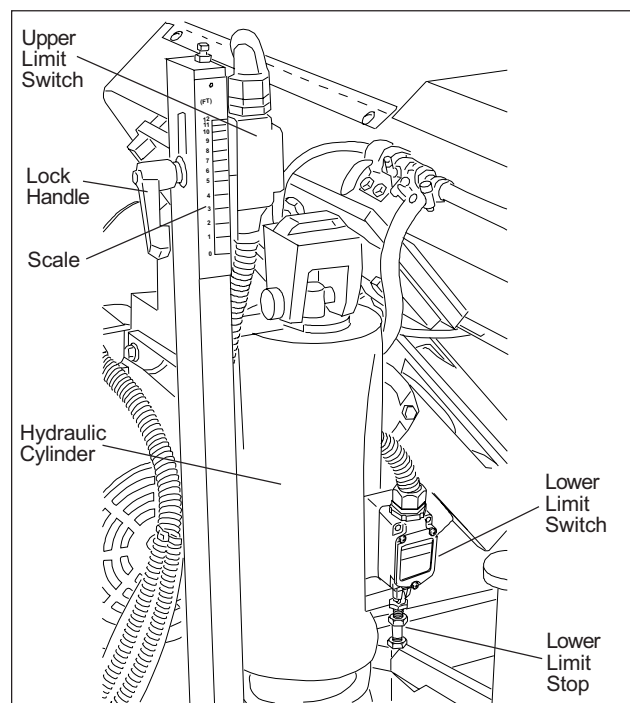


Figure 4: Limit Switches

Controlling the Cut: Hydraulic Feed Control

The weight of the saw arm provides all the force needed to move the saw blade through the workpiece. In fact, if the full weight of the arm is allowed to make the cut, rapid blade wear and poor cutting accuracy will result. A hydraulic feed control is provided on the control panel to provide the operator with a means to control the speed and efficiency of the cutting operation.

The hydraulic cylinder is attached to the saw base and the saw head. Hydraulic pressure is provided to both sides of the hydraulic cylinder piston to raise and lower the saw head. The feed rate control on the control panel determines the rate at which the saw head is raised or lowered.

The amount of downward force can be controlled by using the feed rate control valve. When the valve is opened slightly, the saw head will move downward. The further the valve is opened, the faster the saw head will move downward.

The feed control is adjusted by the operator to maintain cutting efficiency. This is usually determined by observing the chip formation. (See Evaluating Blade Efficiency for more information on cutting efficiency.)

Evaluating Cutting Efficiency

Is the blade cutting efficiently? The best way to determine this is to observe the chips formed by the cutting blade.

If the chip formation is powdery, then the feed rate is much too light, or the blade is dull.

If the chips formed are curled, but colored — that is, either blue or straw-colored from heat generated during the cut — then the feed rate is too high.

If the chips are slightly curled and are not colored by heat — the blade is sufficiently sharp and is cutting at its most efficient rate.

Blade Selection

The cut-off saw is provided with a saw blade that is adequate for a variety of cut-off jobs on a variety of common materials. A 4/6 vari tooth bi-metal blade (5512107) and a 6/10 vari tooth bi-metal blade (5512108) are available from Wilton.

See **Setting Blade Speed** for the speeds recommended for various materials. These selections, while

appropriate for many shop cutting needs, do not encompass the wide variety of blades of special configuration (tooth pitch and set) and special alloys for cutting unusual or exotic materials.

A coarse blade could be used for a solid steel bar but a finer tooth blade would be used on a thin-wall tube. In general, the blade choice is determined by the thickness of the material; the thinner the material, the finer the tooth pitch.

A minimum of three teeth should be on the work piece at all times for proper cutting. The blade and workpiece can be damaged if the teeth are so far apart that they straddle the workpiece.

For very high production on cutting of special materials, or to cut hard-to-cut materials such as stainless steel, tool steel, or titanium, you can ask your industrial distributor for more specific blade recommendations. Also, the supplier who provides the workpiece material should be prepared to provide you with very specific instructions regarding the best blade (and coolant or cutting fluid, if needed) for the material and shape supplied.

Blade Break-in Procedures

New blades are very sharp and, therefore, have a tooth geometry which is easily damaged if a careful break-in procedure is not followed. Consult the blade manufacturer's literature for break-in of specific blades on specific materials. However, the following procedure will be adequate for break-in of Wilton-supplied blades on lower alloy ferrous materials.

1. Clamp a round section workpiece in the vise. The workpiece should be 2 inches or larger in diameter.
2. Set the saw on low speed. Start the cut with a very light feed rate.
3. When the saw has completed 1/3 of the cut, increase the feed rate slightly and allow the saw to complete the cut.
4. Keep the same hydraulic cylinder setting and begin a second cut on the same or similar workpiece.
5. When the blade has completed about 1/3 of the cut, increase the feed rate. Watch the chip formation until cutting is at its most efficient rate and allow the saw to complete the cut (see Evaluating Blade Efficiency). The blade is now considered ready for regular service.

Work Set-up

Securing the Workpiece for Square Cuts (see figure 5)

1. Raise the saw head.
2. Slide the left vise jaw far enough to the left to allow the workpiece to be placed in the vise.
3. Place the workpiece on the work table. If the workpiece is long, provide support at the other end. It may also be necessary to provide additional downward clamping to hold the workpiece securely on the work table.
4. Turn clamping hand wheel clockwise to clamp the workpiece in position against the fixed (right) vise jaw.
5. After completing the cut, turn the clamping hand wheel counterclockwise and slide the left jaw away from the workpiece.

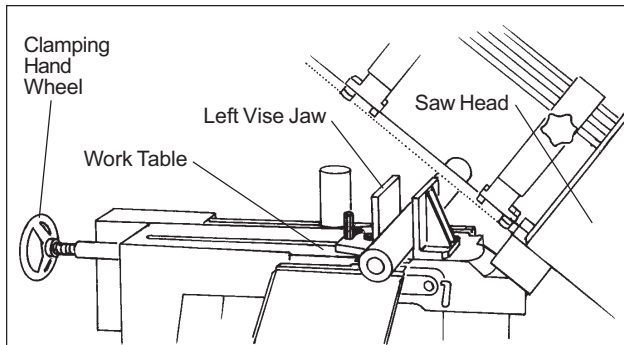


Figure 5: Securing workpiece

Adjusting the Vise for Angle Cuts (see figure 6)

1. Loosen the angle locking screw and the pivot screw on the left vise jaw.
2. Turn the locking handle on the round, angle-setting block counterclockwise to unlock the block. Slide the block until the pointer on the block is aligned with desired angle (see figure 7). Tighten the locking handle to set the angle.
3. Set the workpiece in the vise. Put the front end of the workpiece against the corner of the right vise jaw. Put the rear end of the workpiece against the angle-setting block.
4. Turn clamping hand wheel clockwise until the left vise jaw is parallel with the workpiece. Tighten the pivot screw and angle locking screw on the left vise jaw. Clamp the workpiece in position.
5. After completing the cut, turn the clamping hand wheel counterclockwise and slide the left jaw away from the workpiece.

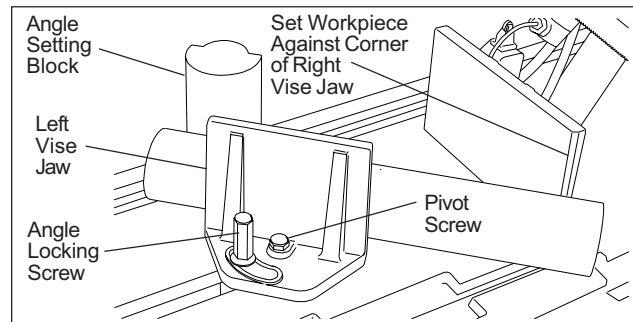


Figure 6: Adjusting vise

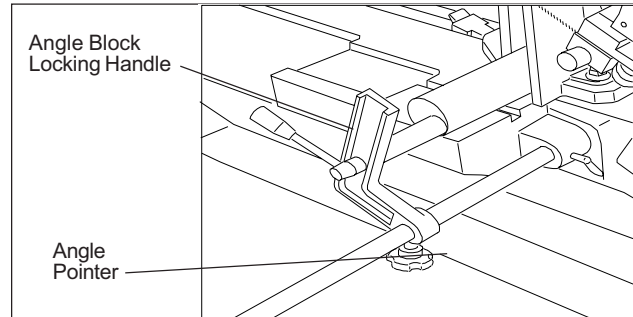


Figure 7: Angle setting block

Installation and Adjustment of Work Stop

The work stop is used to set up the saw for making multiple cuts of the same length (see figure 8). Install and adjust the work stop as follows:

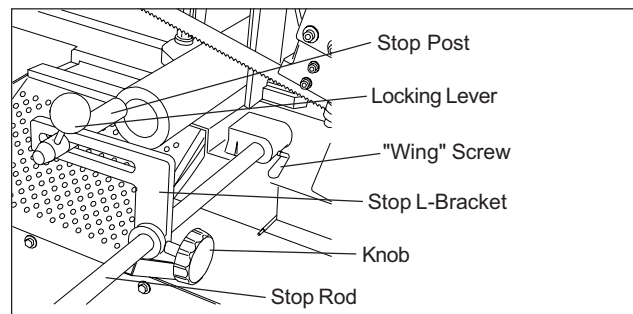


Figure 8: Work stop

1. Insert the end of the stop rod in the hole in the front right side of the work table.
2. Tighten the "wing" screw to secure the rod in place.
3. Install the stop post in the channel on the back of the stop L-bracket. Install the locking lever in the threaded hole in the stop post. Snug-up the locking lever.
4. Install the locking knob in the hole in the side of the stop L-bracket.
5. Slide the assembled stop L-bracket onto the stop

rod. Position the stop post against the work piece and tighten the knob in the stop L-bracket. The stop post can be moved left or right as required to place the stop post against the work piece.

Starting the Saw

WARNING: NEVER OPERATE THE SAW WITHOUT BLADE COVERS IN PLACE AND SECURED.

CAUTION: MAKE SURE THE BLADE IS NOT IN CONTACT WITH THE WORKPIECE WHEN THE MOTOR IS STARTED. DO NOT DROP THE SAW HEAD ON THE WORKPIECE OR FORCE THE SAW BLADE THROUGH THE WORKPIECE.

1. Raise the saw head.
2. Clamp the workpiece in the vise. (See figure 9 for examples of workpieces in the vise.)
3. Be sure to start the saw blade drive motor before allowing the blade to contact the workpiece.
4. Start the motor and allow the saw to come up to speed.
5. Slowly bring the saw down onto the workpiece. Adjust feed rate using feed rate control.
6. DO NOT LOWER THE SAW HEAD AT A RATE FASTER THAN THE SAW'S CAPABILITY OR FORCE THE CUT. Adjust the feed rate so the hydraulic cylinder provides the proper amount of downward force.
7. The saw will automatically shut off at the end of the cut.

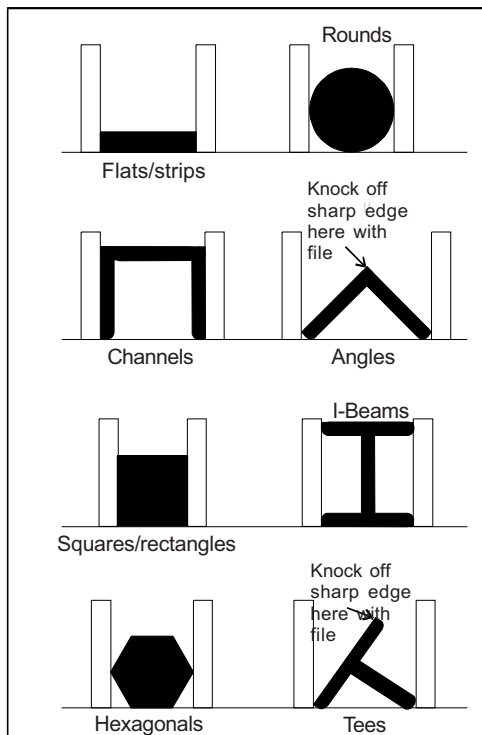


Figure 9: Placing workpieces in the vise

Coolant Flow

CAUTION: THE COOLANT PUMP MUST BE SUBMERGED BEFORE OPERATING TO PREVENT DAMAGE TO THE PUMP.

1. The blade guides are fitted with coolant fittings. Coolant is provided to the fittings through interconnecting tubing. The coolant is dispensed directly onto the saw blade.
2. Adjust the coolant flow valves on the top, rear of the saw head as required to provide the desired flow. The flow should be no more than the blade can draw into the workpiece by movement of the blade.
3. The coolant flow can be stopped in two ways:
 - 1) By using the coolant pump switch on the electrical equipment box, or
 - 2) By closing the coolant flow valves on the top, rear of the saw head.

Coolant Mixture and Quantity

The general purpose coolant is a mixture of water soluble oil and water. Mix one part of soluble oil (TRIM SOL) to ten parts of water (one quart oil, ten quarts of water). The eleven quarts of coolant is the amount required for the coolant pump to operate properly.

There are numerous coolants on the market that are formulated for special applications. Consult your local distributor for details in the event you have a long range production task, or are required to cut some of the more exotic materials.

Adjustments

The efficient operation of the cut-off saw is dependent upon the condition of the saw blade. If the performance of the saw begins to deteriorate, the first item that you should check is the blade.

If a new blade does not restore the machine's cutting accuracy and quality, refer to the Troubleshooting section (or the blade manufacturer's guide) for conditions to consider and adjustments that can be made to increase the life of the blade.

To change the blade, refer to **Changing Blades** in the Maintenance section. To adjust the blade tracking, refer to the following procedures.

Blade Tracking Adjustment

Blade tracking has been tested at the factory. Adjustment is rarely required when the blade is used properly or if the blade is correctly welded. (See figure 10 for location of blade tracking adjustment

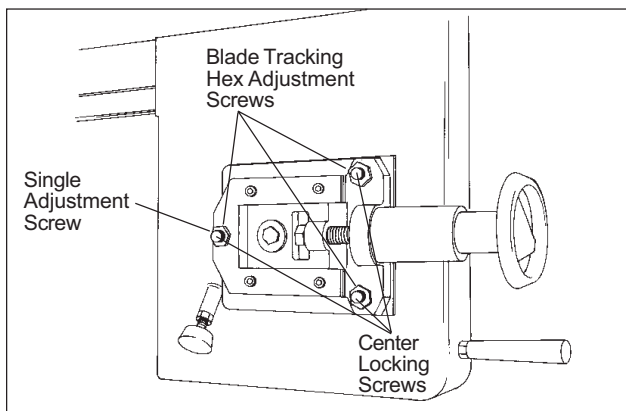


Figure 10: Blade tracking and tensioning

screws.)

Factory or Field Procedure

1. Raise the saw head enough to allow the saw motor to operate.
2. Loosen four knobs securing the blade cover. Lift the cover and swing it backward.
3. Remove the blade guard mounted on the left blade guide support.
4. Remove both blade guide bearing brackets.

NOTE: Maintain proper tension at all times using the blade tensioning mechanism.

5. Loosen the center locking screws in all three hex adjustment screws on the blade tensioning mechanism (see figure 10).

CAUTION: WHILE PERFORMING THE FOLLOWING, KEEP THE BLADE FROM RUBBING EXCESSIVELY ON THE SHOULDER OF THE WHEEL. EXCESSIVE RUBBING WILL DAMAGE THE WHEEL AND/OR THE BLADE.

6. Start the saw. Slowly turn the single hex adjustment screw at the rear of the tracking mechanism to tilt the idler wheel. Do not turn either of the other two adjustment screws. Turn the adjustment screw until the blade is touching the shoulder of the idler wheel.

NOTE: Turning the screw inward causes the blade to move toward the shoulder of the wheel. Turning the screw outward causes the blade to move away from the shoulder.

7. Turn the single hex adjustment screw so the blade starts to move away from the shoulder of the wheel — then immediately turn the single hex adjustment screw in the other direction so the blade stops, then moves slowly toward the shoulder.

WARNING: KEEP FINGERS CLEAR OF THE BLADE AND WHEEL TO AVOID INJURY.

8. Turn the single hex adjustment screw to stop the motion of the blade on the wheel as it gets closer to the wheel shoulder. Put a 6-inch length of paper between the blade and the wheel as shown in figure 11. The paper should not be cut as it passes between the wheel shoulder and the blade.
9. Turn the single hex adjustment screw a small amount. Repeat the insertion of the paper between the wheel shoulder and the blade until the paper is cut in two pieces.

NOTE: You may have to repeat the check with the paper several times before the blade and the shoulder cuts the paper into two pieces. Do not hurry the adjustment. Patience and accuracy here will pay off with better, more accurate, quieter cutting and much longer machine and blade life.

10. When the paper is cut, turn the hex adjustment screw slightly in the counterclockwise direction. This assures that the blade is not touching the shoulder of the wheel.
11. Shut off the saw.
12. Hold the hex adjustment screws with a wrench and tighten the center locking screws. Make sure the hex adjustment screws do not move while tightening the center screws.
13. Install the two blade guide bearing brackets. Position the guides so the bearings just touch the blade.
14. Install the left blade guard.
15. Close the saw head cover. Tighten the four knobs.

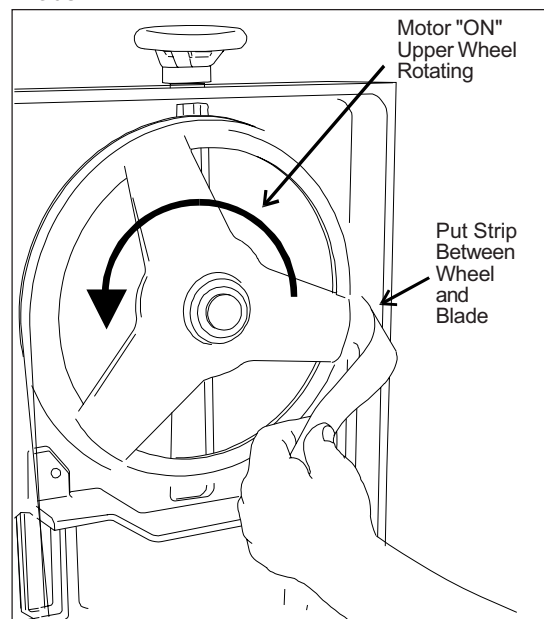


Figure 11: Checking blade-to-wheel clearance using paper strips

Blade Guide Bearing Adjustment

Proper adjustment of the blade guide bearings is critical to efficient operation of the cut-off saw. The blade guide bearings are adjusted at the Factory. They should rarely require adjustment. When adjustment is required, adjust immediately. Failure to maintain proper blade adjustment may cause serious blade damage or inaccurate cuts.

It is always better to try a new blade when cutting performance is poor. If performance remains poor after changing the blade, make the necessary adjustments.

If a new blade does not correct the problem, check the blade guides for proper spacing. For most efficient operation and maximum accuracy, provide 0.001 inch clearance between the blade and the guide bearings. The bearings will still turn freely with this clearance. If the clearance is incorrect, the blade may track off the drive wheel.

CAUTION: CHECK THE BLADE TO MAKE SURE THE WELDED SECTION IS THE SAME THICKNESS AS THE REST OF THE BLADE. IF THE BLADE IS THICKER AT THE WELD, THE GUIDE BEARINGS MAY BE DAMAGED.

If required, adjust the guide bearings as follows:

1. Two blade guides are used in each set of blade guides. The inner blade guide is fixed; the outer blade guide is adjustable. The outer blade guide is adjusted using a knurled knob on the operator side of the blade guide assembly.
2. A guide bearing is provided on the innermost side of the saw blade. The guide bearing is mounted on an eccentric bushing.
3. Hold the bushing with a 3/4-inch wrench and loosen the center locking screw with an Allen wrench (see figure 12).
4. Position the bearing by turning the bushing. Set the clearance at approximately 0.001 inch.

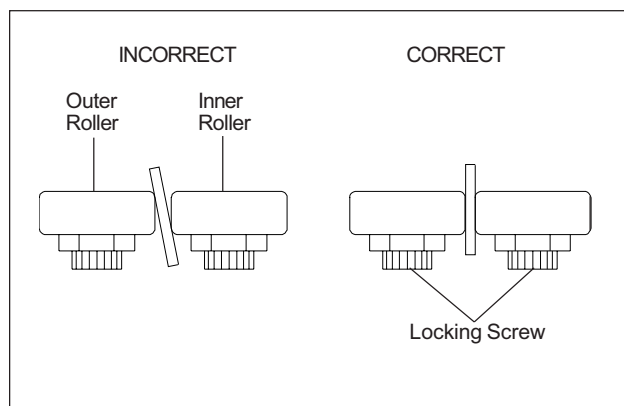


Figure 12: Blade-To-Blade Guide Orientation

5. Tighten the center locking screw with an Allen 5.
5. Tighten the center locking screw with an Allen wrench while holding the eccentric bushing in position with the 3/4-inch wrench.
6. When the adjustment is correct, the guide bearing should rotate freely with slight pressure of the finger (with the blade stopped).
7. Adjust blade-edge bearings so they just touch the back edge of the blade (see figure 19).

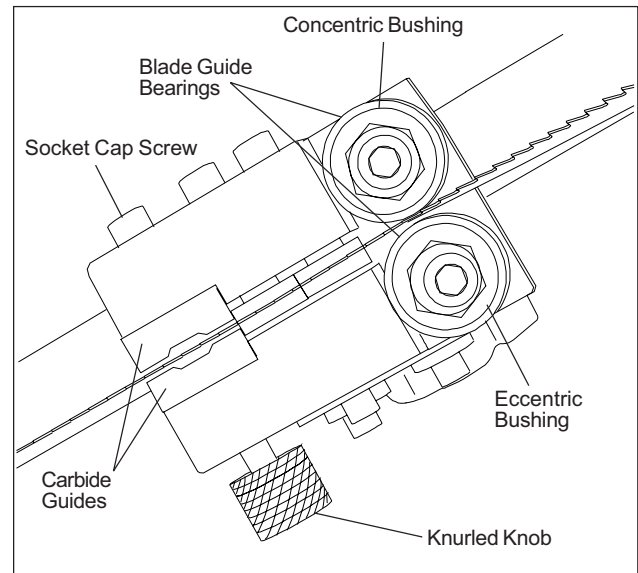


Figure 13: Adjustment of Guide Bearing

Test Cutting to Verify Adjustment Accuracy

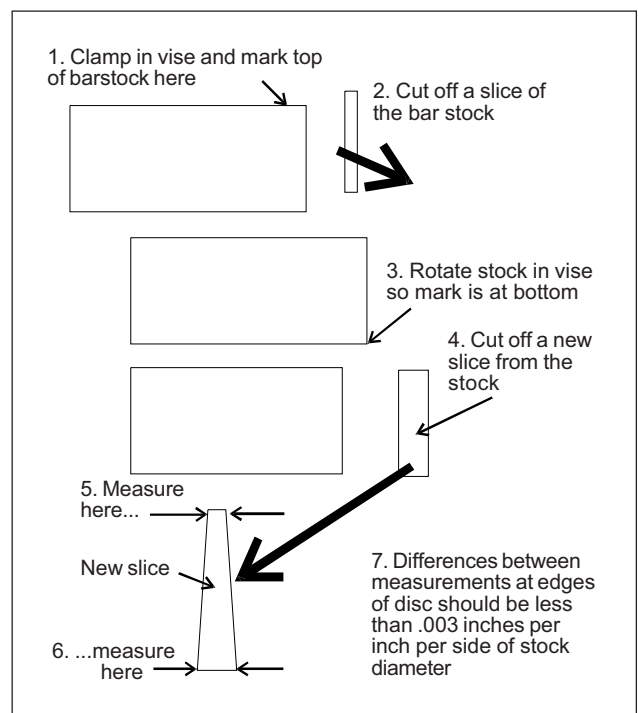


Figure 14: Cutting a Test

Test cuts can be used to determine whether or not you have adjusted the blade accurately. Use 2-inch round bar stock to perform these test cuts, as follows:

1. With the bar stock securely clamped in the vise, make a cut through the bar stock. (See figure 14.)
2. Mark the top of the bar stock.
3. Move the bar stock about 1/4-inch past the blade so you can begin a second cut.
4. Rotate the bar stock 180 degrees so the mark you made is now at the bottom of the cut.
5. Make a cut through the bar stock.
6. Use a micrometer to measure the thickness variation of the disk you have cut from the bar stock. Measure at the top and bottom of the disk. The saw blade can be considered correctly adjusted when the variation measure is no more than 0.012 inch across the face of the disk.

Note: If you do not have a piece of 2-inch bar stock available for a test cut, use a larger diameter test piece rather than a smaller one. Maximum thickness variation on any test piece should be no more than 0.003 inch, per side, per inch of stock diameter.

Adjustment of Limit Switches

Adjustment of Lower Limit Switch

1. The lower limit switch is provided to shut off the saw blade drive motor when the workpiece is cut through. The switch causes the saw head to raise to its uppermost stop.
2. To set the limit switch, loosen the jam nut on the limit switch stop (figure 15).
3. Adjust the stop as required and retighten jam nut.

Adjustment of Upper Limit Switch

1. The upper limit switch is provided to stop the saw head when it reaches its uppermost stop.
2. To set the upper limit switch, loosen the clamping knob on the limit switch support bracket. Move the limit switch to the desired switch trip point (use the scale on the side of the support bracket).

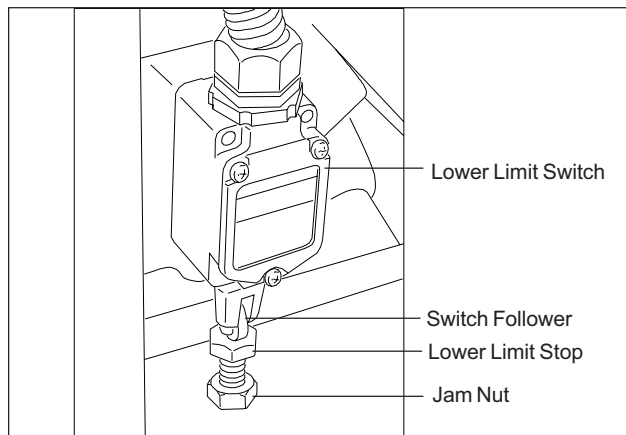


Figure 15: Lower Limit Switch Stop Adjustment

Maintenance Cleaning

1. Clean off any preservative on machine surfaces.
2. After cleaning, coat the machined surfaces of the cut-off saw with a medium consistency machine oil. Repeat the oil coating process at least every six months.
3. Clean up accumulated saw cuttings after use. Make sure the lead screw is kept free of saw cuttings and other material that would cause damage.
4. Clean the chip sludge from the coolant tank. The frequency should be determined by how often the saw is used.

Lubrication

Lubricate the following components at the specified frequencies and using the lubricants defined below:

1. Ball bearings: the bearings are lubricated and sealed—periodic lubrication is not required.
2. Blade guide bearing: the bearings are lubricated and sealed—lubrication is not required. Inspect periodically.
3. Idler wheel bushing: the bearings are lubricated and sealed—lubrication is not required. Inspect periodically.
4. Lead screw bearing housing: lubricate monthly (see exploded figure, page 20).
5. Lead screw: lubricate with light oil monthly (see exploded figure, page 20).
6. Hydraulic cylinder pivot: lubricate with light oil every 6 months (see exploded figure, page 20).
7. Blade tension screw: lubricate with grease every 6 months (see exploded figure, page 24).
8. Blade brush bearing: lubricate with light oil monthly (see exploded figure, page 24).
9. Gear box: check oil once a year.
10. Change coolant on a frequency appropriate to the type of coolant being used. Oil based coolants can sour. Refer to the coolant supplier's instructions for change frequency.
11. Coolant tank: clean every 6 months or as required.
12. Hydraulic oil reservoir: check oil level in oil reservoir by periodically checking the oil level indicator on the side of the reservoir. If oil level is low, service reservoir (refer to **Servicing Hydraulic Oil**).

Servicing Hydraulic Oil

WARNING: SHUT OFF ALL ELECTRICAL POWER TO THE MACHINE

1. Remove hydraulic oil reservoir access panel.
2. Check oil level (refer to Figure 16). If level is below the yellow (upper) line, the reservoir should be filled.
3. Disconnect electrical power.
4. Remove reservoir fill cap.
5. Add oil until the level is at the yellow (upper) line. Install reservoir fill cap.
6. If a significant amount of oil needed to be added, check for oil leaks in pump components, lines, and hydraulic cylinder. Correct source of leakage before operating the cut off saw.
7. Connect electrical power. Raise and lower the saw head to confirm that the saw is operating correctly.

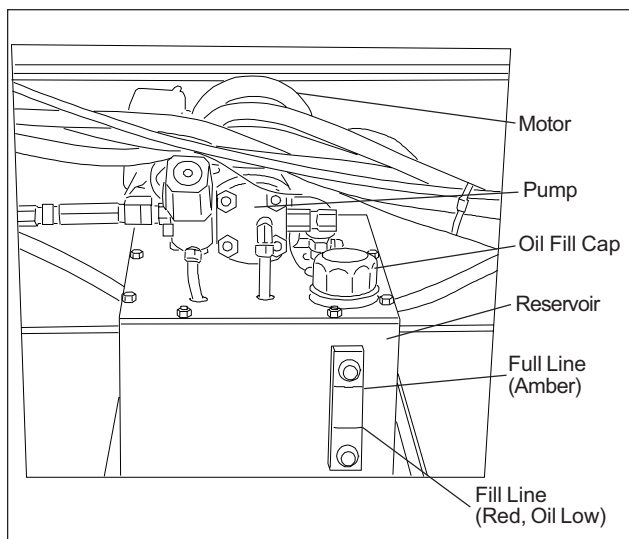


Figure 16: Checking Hydraulic Oil Level

Changing Blades

WARNING: SHUT OFF ALL ELECTRICAL POWER TO THE MACHINE.

1. Loosen four knobs securing the blade cover. Lift the cover and swing it backward.
2. Remove the blade guard mounted to the left blade guide support.

WARNING: ALWAYS WEAR LEATHER GLOVES WHEN HANDLING SAW BLADE TO AVOID INJURY

FROM THE SAW TEETH.

3. Turn the blade tensioning hand wheel clockwise to relieve tension on the blade. Loosen the blade enough to remove the blade from the idler and drive wheels. Remove the blade from between the blade guides.
4. Install the new blade between the blade guide bearings and the carbide blade guides. Install the blade over the drive and idler wheels.
5. Turn the blade tensioning hand wheel counter-clockwise to tighten the blade. Tighten the blade until the blade tension indicator reads TBD.
6. Operate the saw at low speed and observe the tracking of the blade. If tracking needs to be adjusted, refer to **Blade Tracking Adjustment**.
7. Adjust the bearings on the upper edge of the blade until they just contact the blade (see figure 19).
8. Check the guide bearings and the carbide guides to make sure they are just contacting the sides of the blade.
9. Install the left blade guard making sure there is ample clearance with the blade.
10. Make a test cut to make sure the blade tracks properly during operation. Adjust tracking as required (see **Blade Tracking Adjustment**).

Changing the Drive Belt

1. Disconnect the electrical power source from the cut-off saw to prevent any possibility of accidental motor start-up.
2. Set the arm at the full horizontal position.
3. Remove the knob on the drive belt cover. Remove the drive belt cover to expose the V-belt and pulleys.
4. Remove two screws, nuts, and washers from back of saw head support. Push on the motor support bracket to pivot the motor upward to loosen the tension on the belt.
5. Remove the worn belt.
6. Put the replacement belt in the pulleys. Allow the motor to pivot downward.
7. Install the two screws, nuts, and washers in back of saw head support and through the motor support bracket.
8. Install the drive belt cover. Install and tighten the knob on the drive belt cover.

Replacing the Drive Motor

1. Disconnect the motor from all electrical power. Unplug the motor if it is plugged into a socket. Shut off the power to the branch and remove the connection to the junction box if the motor is hard wired to the branch.

2. Remove the drive belt from the drive motor pulley (see **Changing the Drive Belt**).
3. Remove motor pulley.
4. Open the motor junction box and disconnect the power cord wires from their terminals.
5. Remove the nuts, washers and bolts that secure the motor to the mounting plate.
6. Installation of a new motor is a reversal of the above steps.

Replacing the Drive Wheel

1. Remove the blade (see **Changing Blades**).
2. Remove the screw, spring washer, and washer from the speed reducer shaft.
3. Pull the wheel from the speed reducer shaft. Remove the drive key from the speed reducer shaft.
4. Inspection: Examine drive edge and shoulder of the wheel for damage. Replace the wheel if damaged.
5. Install the key in the keyway in the speed reducer shaft. Align the keyway in the wheel with the key in the speed reducer shaft. Reinstall the wheel on the speed reducer shaft.
6. Install the screw, spring washer and washer in the end of the speed reducer shaft.
7. Install the blade (see **Changing Blades**).

Replacing Idler Wheel or Idler Bearing

1. Remove the saw blade (see **Changing Blades**).
2. Remove the screw, spring washer, and washer from the idler shaft.
3. Remove the idler wheel. Remove the bearing from the idler wheel.
4. Inspection: Examine the drive edge and shoulder of the idler wheel for damage. Replace the wheel if damaged.
5. Inspect bearings for damage and smooth operation. Replace if faulty.
6. Install the bearing in the idler wheel. Install the idler wheel on the idler shaft.
7. Install the screw, spring washer and washer in the idler shaft.
8. Install the blade (see **Changing blades**).

Adjusting the Blade Guides

The cut-off saw has adjustable blade guide supports (see figure 17). The blade guide supports allow you to set the blade guides for varying widths of workpieces.

To make accurate cuts and prolong blade life, the blade guide supports should be set to just clear the workpiece to be cut.

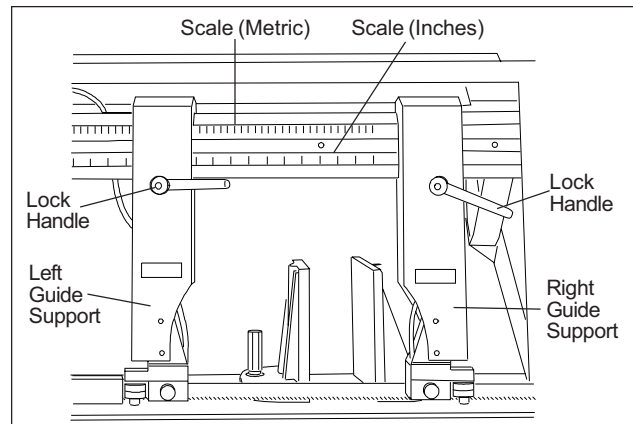


Figure 17: Blade Guide Supports

1. Loosen the knob on the blade guide support and slide the guide left or right as required. Repeat for the other blade guide.
2. Set the blade guide supports as required to accommodate the width/diameter of the workpiece. The blade guides should be positioned so the guides do not contact the workpiece as the saw head moves downward through the workpiece.

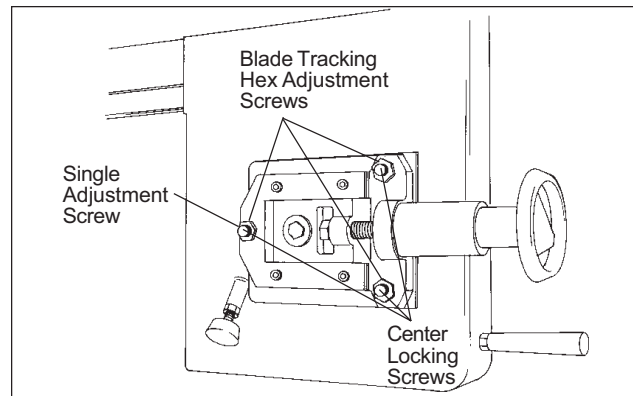


Figure 18: Blade Guide Features

Replacement of Carbide Blade Guides (see figure 19)

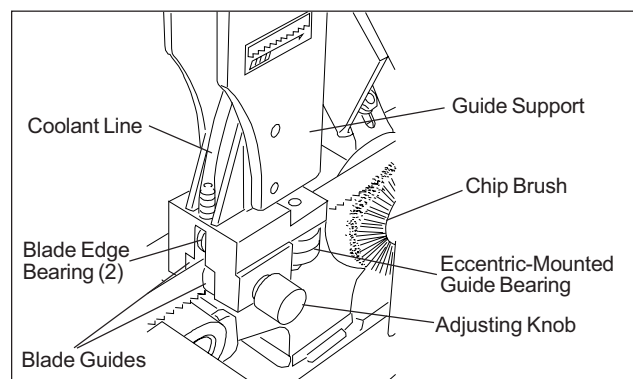


Figure 19: Carbide Blade Guide Replacement

1. Remove front blade guide by removing adjustment knob, spring, and shaft.
2. Remove the rear blade guide by removing its attachment screw
3. Install replacement blade guide in the rear guide location. Secure with attachment screw.
4. Install replacement blade guide in the front guide location. Install shaft into guide. Install spring and adjustment knob.
5. Adjust outermost blade guide using adjustment knob. Set the guide so it just contacts the side of the blade.

Replacement of Guide Bearings (see figure 19)

1. Remove the cap screw from the blade guide bearing. Separate the bushing and cap screw from the bearing. Discard the bearing.
- NOTE:** There is a light press fit between the bearing and the bushing.
2. Install bushing in replacement bearing. Install cap screw through bushing and into guide support.
 3. Turn the eccentric bushing in the guide support until the bearing contacts the blade.

Replacement of Blade Edge Bearings (see figure 20)

1. Remove the capscrew from the blade edge bearing being replaced and discard the bearing.
2. Insert the capscrew into the new bearing.
3. Adjust blade edge guide bearings so they just contact the edge of the blade.

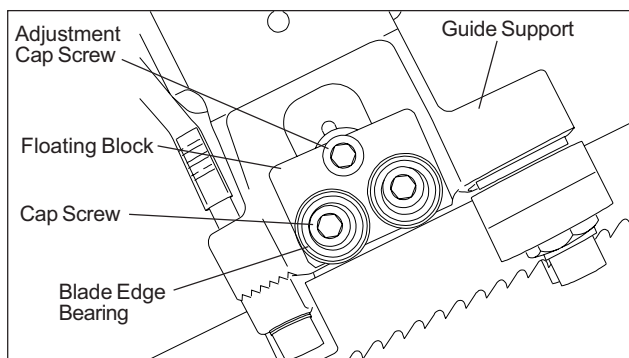


Figure 20: Blade Edge Bearing Replacement

Replacement of the Wire Brush

1. Loosen four knobs securing the blade cover. Lift the cover and swing it backward.

2. Remove the attaching screw, spring washer and washer. Remove and discard the brush (see figure 20).
3. Install replacement brush and secure with screw, spring washer and washer.
4. Close the blade cover and secure with four knobs.

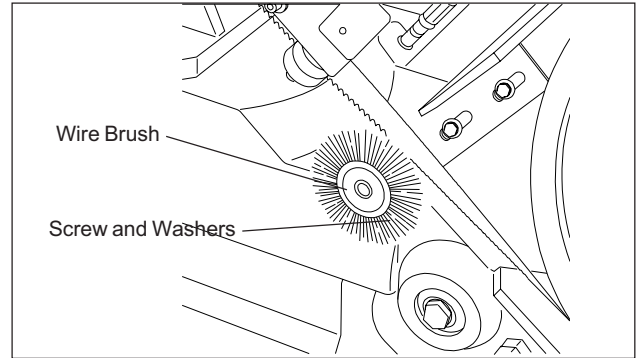


Figure 21: Wire Brush

Replacing the Coolant Pump

WARNING: DISCONNECT ELECTRICAL POWER TO THE MACHINE BEFORE PERFORMING ANY MAINTENANCE.

1. Disconnect electrical power.
2. Remove four screws and the coolant sump cover from the machine base (refer to Figure 21).
3. Disconnect coolant pump wiring (refer to *Wiring Data*).
4. Remove coolant pump attaching screws. Remove the coolant pump.
5. Install replacement coolant pump and secure with attaching screws.
6. Connect electrical wiring to coolant pump (see *Wiring Data*).
7. Connect electrical power. Start the machine to check operation of the pump.
8. Install the coolant sump cover and secure with four screws.

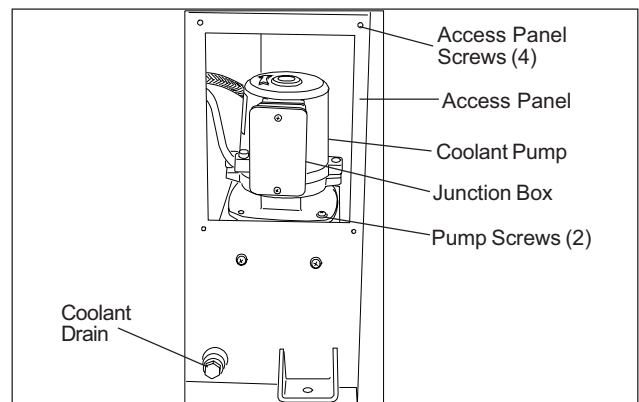


Figure 22: Replacement of Coolant Pump

Machine Setup

The saw delivered to you has been adjusted at the factory. A number of test pieces have been cut using the saw to verify the accuracy of cutting. Therefore, the only setup operations required before releasing the saw for service are spotting the saw and establishing the electrical connections to the motor.

Uncrating and Spotting

Spot the saw where it makes the most sense for the operations you will probably be doing. If you are going to be doing cut-off work on very long pieces of stock, allow plenty of room for the stock, and the infeed and outfeed supports. Remove the saw from the shipping skid and discard any hold-down devices that were used to secure the saw to the skid.

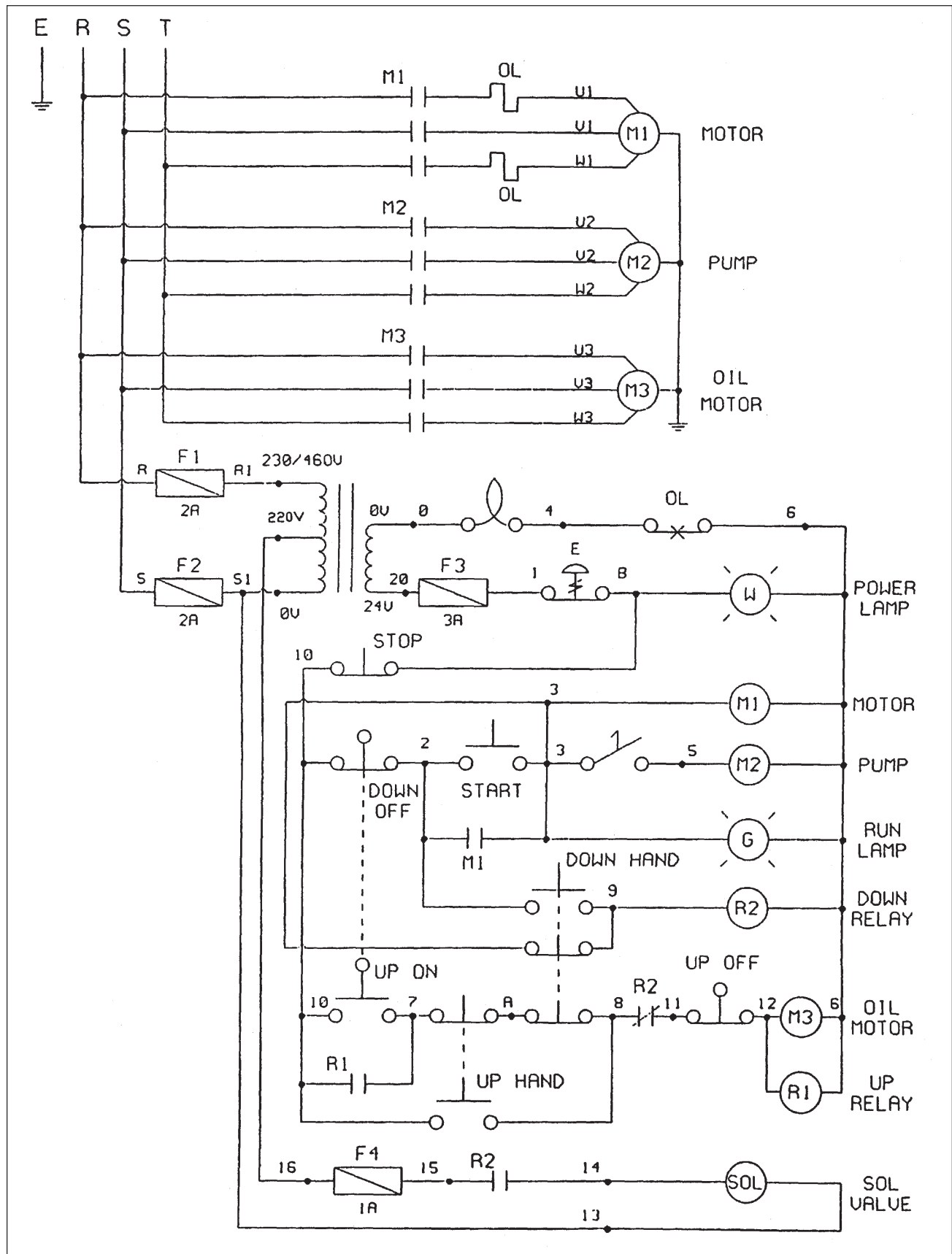
Electrical

Observe the following when connecting to the power source. (The cut-off saw wiring diagrams are provided in Figures 21 and 22.)

WARNING: WILTON RECOMMENDS THAT ANY WIRING INVOLVING HARD WIRING OF THE SAW TO A BRANCH, OR ANY CHANGE OF VOLTAGE SUPPLIED TO THE MOTOR BE PERFORMED BY A LICENSED ELECTRICIAN.

1. Make sure the saw is disconnected from the power source, or that the fuses have been removed or breakers tripped in the circuit in which the saw will be connected. Make sure you put a warning placard on the fuse or circuit breaker to prevent accidental electrical shock.
2. If you are installing the motor power cord into a receptacle, make sure to use the appropriate plug.
3. If you are using hard-wired connections to a junction box, connect the wires in the box, and close the box.
4. Install the fuses or reset the breaker.
5. The saw is now ready for service.

Wiring Diagram



Troubleshooting

Fault	Probable cause	Suggested remedy
Excessive blade breakage	1. Material loose in vise. 2. Incorrect speed or feed. 3. Teeth too coarse for material. 4. Incorrect blade tension. 5. Saw blade is in contact with workpiece before the saw is started. 6. Blade rubs on the wheel flange. 7. Misaligned guides. 8. Cracking at weld.	1. Clamp work securely. 2. Check Machinist's Handbook for speed/feed appropriate for the material being cut. 3. Check Machinist's Handbook for recommended blade type. 4. Adjust blade tension to the point where the blade just does not slip on the wheel. 5. Start the motor before placing the saw on the workpiece. 6. Adjust blade tracking. 7. Adjust guides. 8. Longer annealing cycle.
Premature blade dulling	1. Blade teeth too coarse. 2. Blade speed too high. 3. Inadequate feed pressure. 4. Hard spots in workpiece or scale on/in workpiece. 5. Work hardening of material (especially stainless steel). 6. Insufficient blade tension. 7. Operating saw without pressure on workpiece.	1. Use a finer tooth blade. 2. Try a lower blade speed. 3. Decrease spring tension. 4. Increase feed pressure (hard spots). Reduce speed, increase feed pressure (scale). 5. Increase feed pressure by reducing spring tension. 6. Increase tension to proper level. 7. Do not run blade at idle in/on material.
Bad cuts (out-of-square)	1. Workpiece not square with blade. 2. Feed pressure too fast. 3. Guide bearings not adjusted properly. 4. Inadequate blade tension. 5. Span between the two blade guides too wide. 6. Dull blade. 7. Incorrect blade speed. 8. Blade guide assembly is loose. 9. Blade guide bearing assembly loose. 10. Blade track too far away from wheel flanges. 11. Guide bearing worn.	1. Adjust vise so it is square with the blade. (Always clamp work tightly in vise.) 2. Decrease pressure. 3. Adjust guide bearing clearance to 0.001 inch (0.002 inch maximum). 4. Gradually increase blade tension. 5. Move blade guide bar closer to work. 6. Replace blade. 7. Check blade speed (see Figure 3). 8. Tighten blade guide assembly. 9. Tighten blade guide bearing assembly. 10. Adjust blade tracking. 11. Replace worn bearing.
Bad cuts (rough)	1. Blade speed too high for feed pressure. 2. Blade is too coarse.	1. Reduce blade speed and feed pressure. 2. Replace with finer blade.

Troubleshooting (Continued)

Blade is twisting	1. Blade is binding in the cut. 2. Blade tension too high.	1. Decrease feed pressure. 2. Decrease tension on blade
Unusual wear on side/back of blade	1. Blade guides worn 2. Blade guide bearings not adjusted. 3. Blade guide bearing bracket is loose.	1. Replace blade guides. 2. Adjust blade guide bearings. 3. Tighten blade guide bearing bracket.
Teeth missing/ripped from blade	1. Blade tooth pitch too coarse for workpiece. 2. Feed too slow; feed too fast. 3. Workpiece vibrating. 4. Gullets loading up with chips.	1. Use blade with finer tooth pitch. 2. Increase feed pressure and/or blade speed. 3. Clamp workpiece securely. 4a. Use blade with a coarse tooth pitch—reduce feed pressure. 4b. Brush blade to remove chips.
Motor running too hot	1. Blade tension too high. 2. Drive belt tension too high. 3. Blade too coarse for workpiece (especially with tubular stock). 4. Blade too fine for workpiece (especially with heavier, soft material). 5. Speed reducer gears require lubrication.	1. Reduce tension on blade. 2. Reduce tension on drive belt. 3. Use blade with fine tooth pitch. 4. Use blade with coarse tooth pitch. 5. Check speed reducer.
No coolant flow	1. Pump motor is burned out. 2. Screen/filter on pump is clogged. 3. Impeller is loose. 4. Coolant level too low.	1. Replace pump. 2. Clean screen/filter. 3. Tighten impeller. 4. Add coolant to reservoir.
Excessive speed reducer noise/vibration	1. V-belt is too tight.	1. Reset V-belt tension.

Replacement Parts

This section provides exploded view illustrations that show the replacement parts for the Model 7060 12-Inch x 20-Inch Semi-Automatic Horizontal Cut-Off Band Saw. Also provided are parts listings that provide part number and description. The item numbers shown on the illustration relate to the item number in the facing parts listing.

Order replacement parts from:

WHM TOOL GROUP

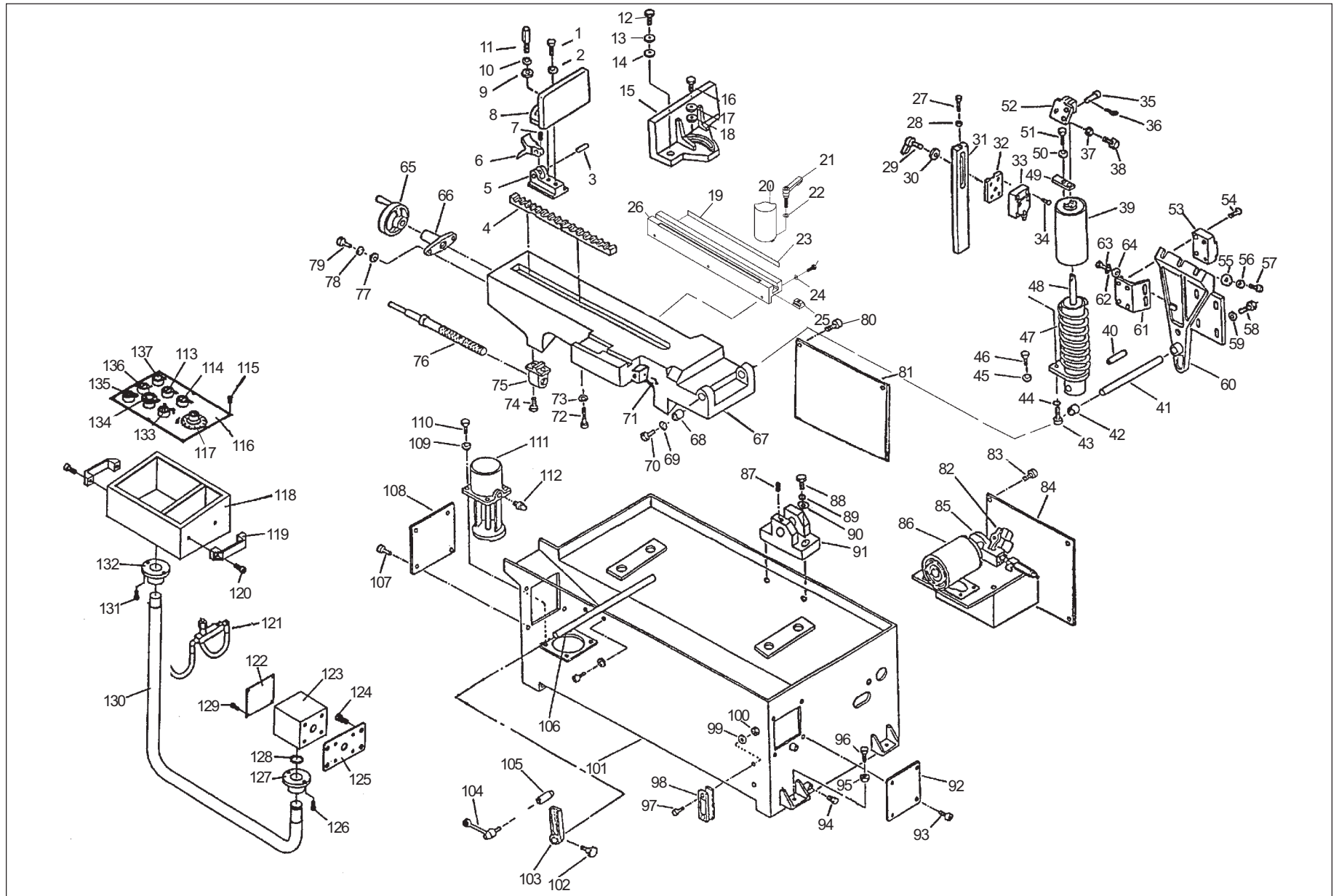
2420 Vantage Drive

Elgin, Illinois 60124

Ph.: 800-274-6848

Identify the replacement part by the part number shown in the parts listing. Be sure to include the model number and serial number of your machine when ordering replacement parts to assure that you will receive the correct part.

Exploded View – Saw Base - Model 7060 Semi-Automatic Cut-Off Band Saw

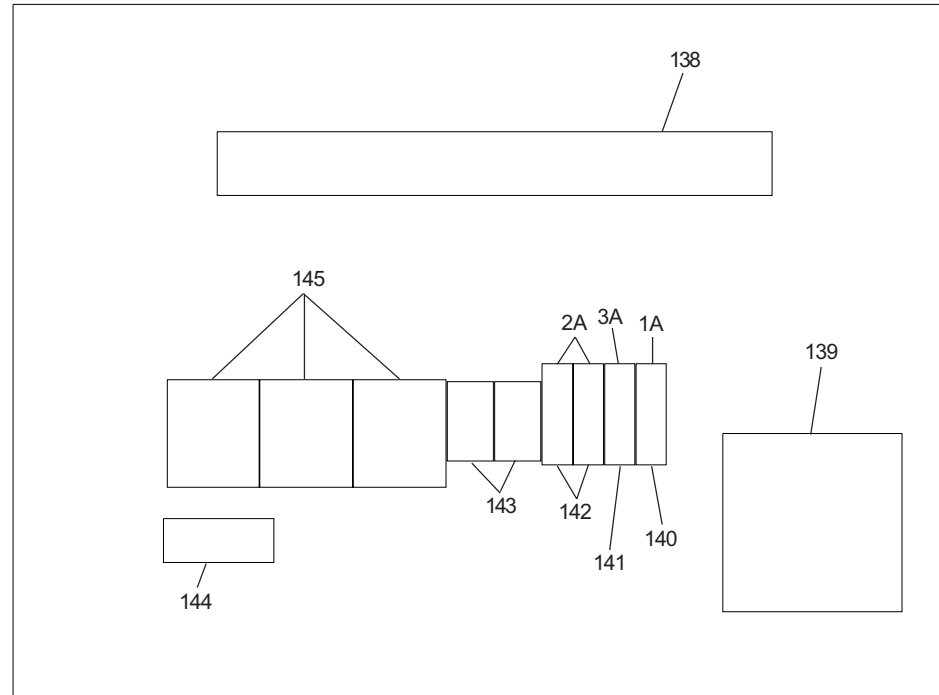


Parts List – Saw Base - Model 7060 Semi-Automatic Cut-Off Band Saw

Ref No.	Part Number	Description	Qty	Ref No.	Part Number	Description	Qty	Ref No.	Part Number	Description	Qty
1	5512120	Bolt, Hex Cap (M12X35)	1	43	5512155	Bolt, Hex Cap (M8X25)	1	81	5512186	Cover, Electrical Panel	1
2	5512121	Washer, Lock (M12)	1	44	5512156	Washer, Lock (M8)	1	82	5512187	Valve, Solenoid	1
3	5512122	Pin	2	45	5512140	Washer (M10)	1	83	5512188	Screw, Hex Cap, Socket (M6X8)	4
4	5512123	Rack	1	46	5512150	Bolt, Hex Cap (M10X30)	1	84	5512189	Cover, Panel	1
5	5512124	Bracket, Slide	1	47	5512157	Spring	1	85	5512190	Pump Assembly, Hydraulic	1
6	5512125	Block, Rack	1	48	5512158	Cylinder Assembly, Hydraulic	1	86	5512191	Motor	1
7	5512126	Screw, Set (M6X10)	1	49	5512159	Plate, Switch Stop	1	87	5512126	Screw, Set (M6X10)	1
8	5512127	Jaw, Vise (Left)	1	50	5512160	Washer, Lock (M6)	1	88	5512192	Bolt, Hex Cap (M12X35)	2
9	5512128	Washer (M12)	1	51	5512161	Screw, Hex Cap, Socket (M6X12)	1	89	5512164	Washer, Lock (M12)	2
10	5512129	Washer, Lock (M12)	1	52	5512162	Plate, Hydraulic Mounting (Top)	1	90	5512128	Washer (M12)	2
11	5512130	Bolt, Locking (M12X35)	1	53	5512163	Switch Limit (5102)	1	91	5512194	Seat, Hydraulic	1
12	5512131	Bolt, Hex Cap (M12X40)	2	54	5512146	Screw, Hex Cap, Socket (M8X20)	4	92	5512195	Cover, Panel	1
13	5512121	Washer, Lock (M12)	1	55	5512128	Washer (M12)	3	93	5512188	Screw, Hex Cap, Socket (M6X8)	4
14	5512128	Washer (M12)	1	56	5512164	Washer, Lock (M12)	3	94	5512197	Plug, Drain (3/8-In. PT)	1
15	5512173	Jaw, Vise (Right)	1	57	5512165	Bolt, Hex Cap (M8X50)	3	95	5512198	Nut, Hex (M12)	4
16	5512131	Bolt, Hex Cap (M12X40)	2	58	5512166	Bolt, Hex Cap (M8X20)	4	96	5512199	Bolt, Hex Cap (12X70)	4
17	5512121	Washer, Lock (M12)	1	59	5512167	Washer (M8)	4	97	5512200	Bolt, Hex Cap (M10X30)	2
18	5512128	Washer (M12)	1	60	5512168	Bracket, Pivot	1	98	5512201	Gauge, Coolant	1
19	5512174	Scale, Angle	1	61	5512169	Bracket, Limit Switch	1	99	5512140	Washer (M10)	2
20	5512132	Block, Protractor Vise	1	62	5512156	Washer, Lock (M8)	2	100	5512202	Nut (M10)	2
21	5512133	Handle, Locking	1	63	5512171	Bolt, Hex Cap, Socket (M8X20)	2	101	5512203	Base	1
22	5512134	Washer (1/2-inch)	1	64	5512167	Washer (M8)	2	102	5512204	Knob, Lock	1
23	5512135	Screw (3/8 x 1-inch)	3	65	5512676	Hand Wheel Assembly	1	103	5512205	Bracket, Stop	1
24	5512136	Washer	3	66	5512677	Seat, Lead Screw	1	104	5512206	Handle, Lock	1
25	5512137	Seat, Protractor	1	67	5512175	Work Table	1	105	5512207	Stop, Work	1
26	5512138	Stop Block, Protractor	1	68	5512154	Bearing, Needle (CB3020)	1	106	5512208	Rod, Stop	1
29	5512139	Screw, Hex Cap, Socket (M10X25)	1	69	5512128	Washer (M12)	1	107	5512188	Bolt, Hex Socket Cap (M6X8)	4
30	5512140	Washer (M10)	1	70	5512155	Bolt, Hex Cap (M8X25)	2	108	5512210	Cover, Panel	1
27	5512141	Bolt, Hex Cap (M8X30)	1	71	5512178	Knob, Lock	1	109	5512211	Washer, Lock	2
28	5512142	Nut (M8)	1	72	5512179	Bolt, Hex Cap, Socket (M8X25)	1	110	5512212	Screw, Pan Head (M6X16)	2
31	5512143	Bracket, Adjusting	1	73	5512167	Washer (M8)	1	111	5512675	Pump, Coolant (1-Hp/3Ph)	1
32	5512144	Plate, Switch Mounting	1	74	5512166	Bolt, Hex Cap (M8X20)	2	112	5512214	Tube, Connecting	1
33	5512145	Switch Limit (5101)	1	75	5512182	Seat, Lead Screw	1	113	5512215	Switch (Saw Head Up)	1
34	5512146	Screw, Hex Cap, Socket (M8X20)	4	76	5512183	Screw, Lead	1	114	5512216	Switch (Saw Head Down)	1
35	5512147	Pin, Cylinder	1	77	5512213	Washer (M8)	2	115	5512217	Screw, Pan Head (M5X8)	8
36	5512148	Pin, Retaining	1	78	5512156	Washer, Lock (M8)	2	116	5512218	Panel, Control	1
37	5512149	Washer, Lock (M10)	4	79	5512184	Bolt, Hex Cap (M8X30)	2	117	5512219	Control, Cutting Pressure	1
38	5512150	Bolt, Hex Cap (M10X30)	4	80	5512185	Screw	4	118	5512220	Box, Control	1
39	5512151	Cover, Cylinder	1					119	5512221	Handle	1
40	5512152	Pin (20MM)	1								
41	5512153	Shaft, Pivot	1								
42	5512154	Bearing, Needle (CB3020)	1								

Parts List – Saw Base - Model 7060 Semi-Automatic Cut-Off Band Saw, (Continued)

Ref No.	Part Number	Description	Qty
120	5512222	Screw, Pan Head (M6X15)	4
121	5512223	Valve, Relief	1
122	5512224	Plate, Cover	1
123	5512225	Box, Stationary	1
124	5512226	Screw (M8X16)	4
125	5512227	Plate, Sole	1
126	5512228	Screw (1/4X5/8 In.)	2
127	5512229	Bushing, Stationary Box	1
128	5512230	Collar	1
129	5512231	Screw (M5X8)	4
130	5512232	Rod, Control	1
131	5512228	Screw (1/4X5/8 In.)	2
132	5512234	Bushing, Control Box	1
133	5512235	Switch, Coolant	1
134	5512682	Emergency Stop	1
135	5512237	Switch, Stop	1
136	5512238	Switch, Start	1
137	5512681	Light, Power Indicator	1
138	5512240	Strip, Terminal	1
139	5512241	Transformer (3Ph)	1
140	5512242	Fuse 1A	1
142	5512243	Fuse 2A	2
141	5512244	Fuse 3A	1
143	5512245	Relay	2
144	5512246	Switch, Overload	1
145	5512247	Contactor, Magnetic (3Ph)	3



Electrical Components

Parts List – Saw Head - Model 7060 Semi-Automatic Cut-Off Band Saw

Ref No.	Part Number	Description	Qty	Ref No.	Part Number	Description	Qty	Ref No.	Part Number	Description	Qty
146	5512248	Bearing, Thrust (51194NJK)	1	190	5512285	Box Assembly, Blade Wheel	1	229	5512323	Screw, Hex Cap, Socket (M10X25)	2
147	5512249	Indicator, Tension	1	191	5512149	Washer, Lock (M10)	4	230	5512324	Bracket, Side	1
148	5512250	Washer, Flat	1	192	5512287	Bolt, Hex Cap (M10X35)	4	231	5512325	Wheel, Idler	1
149	5512251	Washer, Special Spring	18	193	5512288	Hose (30MM)	1	232	5512326	Bearing, Ball (6206Z)	3
150	5512252	Bracket, Slide	1	194	5512192	Bolt, Hex Cap (M12X35)	4	233	5512327	Washer (M12X35W)	1
151	5512253	Washer, Lock	3	195	5512129	Washer, Lock (M12)	4	234	5512328	Bolt, Hex Cap (M12X25)	4
152	5512254	Screw, Hex Cap	3	196	5512291	Nozzle, Flexible	1	235	5512329	Guard, Blade	1
153	5512255	Screw Assembly	3	197	5512292	Guide, Blade	1	236	5512330	Bracket, Guide (Left)	1
154	5512126	Screw, Set (M6X10)	1	198	5512293	Knob	2	237	5512331	Screw, Hex Cap, Socket (M8X30)	1
155	5512256	Nut, Hex (M16)	1	199	5512294	Bolt, Stand	1	238	5512332	Bearing, Ball	4
156	5512257	Screw, Hex Cap, Socket (M12X25)	1	200	5512295	Nut, Hex (1/4 In.)	1	239	5512333	Screw, Hex Cap, Socket (M6X16)	4
157	5512128	Washer (M12)	1	201	5512296	Clamp, Hose	2	240	5512684	Rear Blade Guide, Left	1
158	5512259	Bracket, Slide	1	202	5512297	Bracket, Blade (Left)	1	241	5512683	Front Blade Guide, Left	1
159	5512260	Gib	2	203	5512128	Washer (M12)	4	242	5512678	Assembly, Eccentric Shaft	2
160	5512261	Shaft, Blade Wheel Bracket	1	204	5512299	Bolt, Hex Cap (M12X30)	4	242A	5512337	Screw, Cap (M8X40)	4
161	5512146	Screw, Hex Cap, Socket (M8X20)	6	205	5512300	Bolt, Hex Cap (M6X12)	2	242B	5513861	Bearing, Ball (6201ZZ)	8
162	5512156	Washer, Lock (M8)	6	206	5512301	Washer, Lock (M6)	2	242C	5517141	Bushing, Eccentric Shaft	2
163	5512263	Shaft, Tension	1	207	5512302	Bracket, Blade (Right)	1	243	5512340	Shaft	2
164	5512264	Bar, Extension	1	208	5512167	Washer (M8)	6	244	5512341	Spring	2
165	5512265	Key (5X5X20)	1	209	5512156	Washer, Lock (M8)	6	245	5512342	Knob, Adjusting	2
166	5512266	Wheel, Handle	1	210	5512304	Seat, Wire Brush	1	246	5512343	Wheel, Drive	1
167	5512267	Screw, Set (M8X10)	1	211	5512680	Brush, Wire	1	247	5512344	Washer (M12 X50MM)	1
168	5512268	Head, Connection	1	212	5512306	Washer (M6)	1	248	5512345	Screw	1
169	5512269	Clamp, Hose	5	213	5512107	Blade 4/6 TPI (Standard)	1	249	5512346	Bracket, Guide (Right)	1
170	5512270	Gear Box Assembly	1		5512108	Blade 6/10 TPI	1	250	5517140	Bushing, Center Shaft	2
171	5512271	Motor	1	214	5512308	Screw, Hex Cap, Socket (M10X45)	4	251	5512686	Rear Blade Guide, Right	1
172	5512272	Key (8X8X40)	1	215	5512149	Washer, Lock (M10)	4	252	5512685	Front Blade Guide, Right	1
173	5512273	Key (7X7X45)	1	216	5512140	Washer (M10)	4	253	5512350	Cover, Blade Wheel (Right)	1
174	5512274	Seat, Support Bracket	1	217	5512311	Washer	1	254	5512222	Screw, Pan Head (M6X15)	4
175	5512156	Washer, Lock (M8)	3	218	5512312	Screw	1	255	5512351	Screw, Hex Cap, Socket (M6X12)	2
176	5512275	Belt (1922V321)	1	219	5512192	Bolt, Hex Cap (M12X35)	2	256	5512160	Washer, Lock (M6)	2
177	5512276	Bolt, Hex Cap (M8X16)	3	220	5512314	Screw, Set (M8X10)	4	257	5512306	Washer (M6)	2
178	5512277	Variable Speed Assembly	1	221	5512315	Bracket, Adjustable Mount (Right)	1	258	5512221	Handle	2
179	5512278	Knob (3/8 In.)	1	222	5512316	Bracket, Adjustable Mount (Left)	1	259	5512354	Guard, Wire Brush	1
180	5512279	Washer	1	223	5512317	Block, Lock	2	260	5512355	Screw (1/4X3/8)	6
181	5512280	Cover, Pulley	1	224	5512318	Screw, Set (M8X16)	8	261	5517143	Assembly, Center Shaft	2
182	5512281	Pulley, Gear Box	1	225	5512319	Handle, Locking (3/8X2 In.)	2				
183	5512282	Shaft	1	226	5512140	Washer (M10)	2				
184	5512283	Plate, Variable Speed	1	227	5512321	Scale, Angle	1				
185	5512284	Plate	2	228	5512322	Screw, Pan Head (M5X8)	4				
186	5512167	Washer (M8)	3								

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